

Title (en)

Acid and alkali resistant nickel-chromium-molybdenum-copper alloys

Title (de)

Säure und alkaliresistente Nickel-Chrom-Molybdän-Kupferlegierungen

Title (fr)

Alliages de nickel-chrome-molybdène-cuivre résistants aux acides et alcalins

Publication

EP 2660342 B1 20150218 (EN)

Application

EP 13002282 A 20130429

Priority

- US 201261640096 P 20120430
- US 201213719369 A 20121219

Abstract (en)

[origin: EP2660342A1] A nickel-chromium-molybdenum-copper alloy resistant to 70% sulfuric acid at 93°C and 50% sodium hydroxide at 121°C for acid and alkali neutralization in the field of waste management; the alloy contains, in weight percent, 27 to 33 chromium, 4.9 to 7.8 molybdenum, greater than 3.1 but no more than 6.0 copper, up to 3.0 iron, 0.3 to 1.0 manganese, 0.1 to 0.5 aluminum, 0.1 to 0.8 silicon, 0.01 to 0.11 carbon, up to 0.13 nitrogen, up to 0.05 magnesium, up to 0.05 rare earth elements, with a balance of nickel and impurities. Titanium or another MC carbide former can be added to enhance thermal stability of the alloy.

IPC 8 full level

C22C 19/05 (2006.01); **C22F 1/10** (2006.01)

CPC (source: EP GB KR US)

C22C 1/04 (2013.01 - KR); **C22C 19/05** (2013.01 - KR); **C22C 19/053** (2013.01 - EP GB US); **C22C 19/055** (2013.01 - EP US); **C22C 30/02** (2013.01 - GB); **C22F 1/10** (2013.01 - EP US)

Cited by

US10173290B2; US9802387B2; US10329647B2; US10954588B2; US11253957B2; US11939646B2; US10851444B2; US11279996B2; US11085102B2; US11111912B2

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DOCDB simple family (publication)

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EP 13002282 A 20130429; AU 2013205303 A 20130418; BR 102013010555 A 20130429; CA 2808870 A 20130311; CN 201310153936 A 20130428; DK 13002282 T 20130429; ES 13002282 T 20130429; GB 201307692 A 20130429; JP 2013093205 A 20130426; KR 20130041580 A 20130416; MX 2013004583 A 20130424; TW 102105750 A 20130219; US 201213719369 A 20121219; US 201615177780 A 20160609; ZA 201303083 A 20130426